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THE "CATCH-UP" PROCESS, FINANCIAL SYSTEM, AND JAPAN'S RISE AS A CAPITAL EXPORTER

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I. *Introduction*

This paper has two objections. Firstly, it explores the basic characteristics of the Japanese financial system with special attention to the demand and supply of long-term funds in the context of the economic 'catch-up' accomplished by Japan in postwar economic development. It is argued that the state of excess demand for long-term funds characteristic of the 'catch-up' process has given way to a state of excess supply as the economy moved into slow growth phase. Secondly, it is shown that the recent huge current account surplus or capital export is the result of the de-regulation of financial system in the sense that the international financial intermediation of export of long term funds and import of short-term funds has had continuous impact on the real exchange rate.

Section II deals with the Japanese financial system during the 'catch-up' period, roughly before the first oil crisis. It is argued here that the rapid economic growth based upon borrowed technology inevitably results in excess demand for long-term funds. During the postwar high growth period, the financial system was specially tailored to fulfil the aim of creation and allocation of long-term funds. This was attained through rationing of industrial bonds, use of government finances and specialized private financial institutions, along with a complementary but important role played by Bank of Japan credit controls.

Section III is concerned with the low economic growth period after 1973, and examines the nature of de-regulation of the financial system. It is shown that the rapid accumulation of government bonds and concomitant development of bond and money markets drastically increased the liquidity in the financial markets. Coupled with the recent decline in government deficits, this is considered to have reversed the market condition for long-term funds from excess demand to excess supply. Although foreign sector provides a natural outlet for these long-term funds, it is shown that this flow has been quite gradual as institutional investors and corporate sector have been slow to adjust their portfolios on account of governmental regulations and lack of expertise in international financial dealings.

In section IV, we investigate the excess supply of long-term funds from the point of view of international financial intermediation. We intend to show that the export of long-term funds is in effect a mirror image of the import of short-term funds mainly through financial account of commercial banks. This entailes the following two important consequences. First, since the long-term capital export is mostly without cover, while the short-term borrowings by commercial banks are swap dealings in foreign exchange market, financial inter-

mediation causes immediate fall in nominal exchange rates. Assuming the price level adjust slowly, it results in the fall of real exchange rate (Dornbusch). Secondly, the gradual export of long-term funds from Japan tends to lower interest rates in such recipient countries (like the US and Asian NICs) stimulating government expenditure and capital formation in those countries. Finally, it can be seen that the Japanese current account surplus (deficits in recipient countries), due to a fall in real exchange rate, assures equilibrium in international goods markets. In sum, the main purpose in this section is to show that the massive but slow process of international financial intermediation arising out of the excess supply of long-term funds is one of the important causes of real exchange rate depreciation and huge current account surplus in Japan after 1982.

II. *"Catch-up" Process and the Financial System*

(1) Economic 'Catch-up' with Borrowed Technology

One of the ways to look at the postwar development of the world economy is to view it as a process of industrial 'catch-up' undertaken by various economies: Japan, Germany, France and other smaller OECD countries tried to overtake the US and the UK, while Asian and Latin-American NICs are now trying to attain the levels achieved by OECD countries. Such 'catch-up' process was naturally carried out through a massive import of new technology, new products and new industries from more advanced countries. As is well known, economies receiving technology are normally able to attain higher growth rates as compared with that of the supplies of technology.[1] This results from the fact that while the borrowers can equip all of their factories with machines embodying newest technology, the suppliers, having to develop their own technology, are saddled with a backlog of machines of older vintage. Furthermore, reliance on the borrowed technology leads to faster change in the industrial structures than would be possible otherwise. Thus, we find marked differences in the postwar growth rates in per capita GNP among OECD countries with two suppliers

TABLE 1. ANNUAL GROWTH RATE OF REAL GDP PER CAPITA (OECD COUNTRIES)

(%)

	1960-68	1968-73	1973-79
US	3.1	2.2	1.6
UK	2.4	2.9	1.4
Japan	9.4	7.3	2.5
Germany	3.3	4.1	2.6
France	4.2	5.0	2.7
Italy	5.0	3.9	2.0
Canada	3.7	4.3	2.1
17 other smaller OECD countries	3.8	4.2	1.4
average	4.36	4.24	2.04
standard deviation	2.04	1.42	0.50

Source: OECD, *Economic Outlook* (Historical Statistics 1960–1981).

[1] Gerschencron, A.

TABLE 2. VALUE ADDED IN AGRICULTURE AS A PERCENTAGE OF GDP (OECD COUNTRIES)

	1960–67	1968–73	1974–81
US	3.4	2.9	2.9
UK	3.0	2.5	2.2
Japan	10.2	6.3	4.7
Germany	4.8	3.4	2.5
France	8.8	6.6	4.7
Italy	11.5	8.1	6.9
Canada	5.3	3.9	4.0
17 other smaller OECD countries	17.3	8.5	7.0
average	7.41	5.28	4.36
standard deviation	3.48	2.23	1.73

Note: Annual averages
Source: Same as for Table 1

of technology, US and UK, at lower end and Japan, among others, upon the upper end of the scale (Table 1). The differences narrowed toward 1970s as technology transfers reached near saturation. Table 2 shows that the industrial structure of late-comers measured in terms of share of agricultural sector, has tended to converge to the level of US and UK, and again the speed of convergence has been the highest in Japan.

The process of industrial 'catch-up' with borrowed technology, however, imposes severe strains on the finances of the economy. The capital-labor ratio of imported machinery embodying borrowed technology is usually much higher than the capital-labor ratios dictated by the domestic resource endowments. This implies that the requirement of long-term funds in an economy relying upon borrowed technology are much higher. The increased demand for long-term capital arises not only in the modern sector using imported technology directly, but also from the traditional sectors which are forced to make accelerated adjustments in these structure. The necessity for swifter implementation of social and industrial overhead capital would also increase the demand for long-term capital under such circumstances. On the other hand, it can be said that the supply of long-term capital is normally scarce for late-comer countries, since the level of wealth accumulation as compared to GNP is low and people tend to prefer short-term assets.

In short, the 'catch-up' process with borrowed technology can be visualized to result in excess demand for long-term funds in the financial market, and the main task of financial system lies in creating long-term funds for economic development out of short-term funds supplied by asset-holders, and in efficiently allocating these scarce funds growing modern sectors, to traditional declining sectors, and to social and industrial overheads.[2]

(2) Financial System before the Oil Crisis

Japan faced an acute shortage of long-term funds in immediate postwar period. The maturity period of asset-holdings, on the supply side, fell drastically. For example, the share of time and saving deposits in total bank deposits fell from 50.4% in 1935 to 14.5%

[2] Zysman, J. gives an extensive analysis of the relationship between catch-up, financial system and industrial policy from a different point of view.

TABLE 3. FINANCIAL ASSETS HELD BY PERSONAL SECTOR AS A PROPORTION OF GNP

End of Year	Japan	US
1955	1.08	2.19
1960	1.58	2.34
1965	2.00	2.55
1970	1.98	2.35
1975	2.23	2.04
1980	2.48	2.13
1982	2.69	2.14

Source: Horiuchi, A.

in 1945 due to the hyperinflation during and after the war. The ratio of private financial assets to GNE fell by two-thirds, and prewar wealthy classes were virtually wiped out both due to inflation and due to postwar reforms such as Zaibatsu dissolution and land reform. Table 3 compares the financial assets/GNP ratio between Japan and US in the postwar period.

On the other hand, there arose a massive demand for long-term funds. The reconstruction of modern manufacturing sector was an urgent problem needed attention and import of foreign technology accelerated. Moreover, the difference in productivity and per capita income between agriculture and nonagriculture as well as between small and large firms tended to widening. Therefore, the financial system of the postwar catch-up process, which was established and reorganized during 1950–55, can be seen to be especially designed to cope with the problem of excess demand for long-term funds. The main characteristics of the system, given an extended analysis in our background paper ("Economic Growth and Regulation of Financial Markets: Japanese Experience during Postwar High Growth Period," July 1985) can be summarized as follows. The creation and allocation of long-term funds was attained through rationing of bond issuance, government finance system and specialized private financial institutions.

(i) Rationing of industrial bond issuance

Industrial overhead sector was the main beneficiary of the rationing system: The share of electricity in total issuance was the highest at 43% followed by steel at 10% during 1956–74. Since these bonds were issued at a preferential price higher than the market price, their resale in the market would have resulted in losses for the underwriting banks. However, the Bank of Japan was always at hand to buy these bonds as a means of credit supply to private banks.

(ii) Government financial system

The main source of funds of this system were postal savings, which collected long-term deposits using special instruments, *"Teigaku-Chokin,"* with a regulated rate of interest lower than that paid by commercial banks on deposits with short-term maturity period but higher that on deposits with longer maturity period. The supply of funds from this system, called the Fiscal Investment and Loans Program (*Zaisei-Toyushi*), went mainly to the declining sectors such as coal mining, textiles, agriculture and small-and-medium sized firms as well as social and industrial overheads at preferentially low rates of interests.

(iii) Specialized private financial institutions

Some categories of private banks such as *Sogo* banks and *Shinkin* banks were stipulated to lend only to small-and-medium sized firms and the personal sector. There were also

special institutions which specialized in agricultural loans. The long-term credit banks had the big businesses in the modern sector as their clientele. Their financial bonds, though issued at preferential high price, were eligible as collateral for Bank of Japan credit.

It is important to note that, within this highly regulated and segmented financial system, the credit supply of Bank of Japan was used quite effectively to keep the financial institutions liquid and sound. For one thing, although almost all the bonds, whether industrial, financial governmental or municipal, were compulsorily underwritten by syndicated banks especially by city banks, the Bank of Japan credit was used to increase their liquidity either by making them eligible collateral or direct object of buying operations. Moreover, Bank of Japan took a highly accomodating stance in its credit supply—increasing credit whenever demand for it increased. This point has been emphasized in Teranishi, and tentatively confirmed by Horiuchi and Otaki using causality analyses based on time series data before 1973.

Two consequences of this system of regulations are worth mentioning.

(i) Underdevelopment of capital markets. Since selling bonds in the market resulted in losses for the underwriters, the bond market, especially secondary bond market, remained quite inactive throughout the period. Together with governmental regulations, the low level of accumulation by private asset-holders had been another major obstacle to the development of security markets, which relies on the mechanism of risk-pooling through diversification of security held.

(ii) Underdevelopment of money markets. It can be argued that there was, in a sense, a vertical system of liquidity supply. Bank of Japan was accomodating in supplying credit to city banks, and city banks, in turn, were passive in their credit extension to big business in the modern sector, and finally, big business was quite generous in their supplying trade credit to small-and-medium sized firms. Consequently, the short-term money market was quite underdeveloped during the period. The call-loan market was the only active market acting as a mere conduit of funds to the city banks from other banks *(shikin-henzai)* under the direct influence of Bank of Japan credit control, and was closed to nonbank economic units.

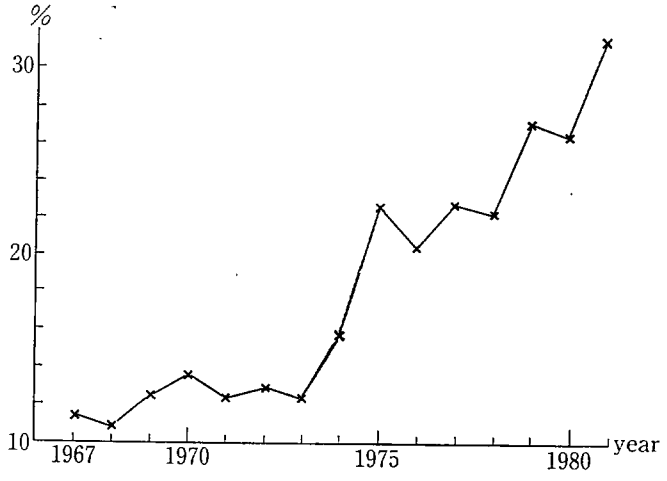
Incidentally, although we are not in a position to present a detailed analysis as yet, it is important to note that the role of trade policy, especially import restrictions, was highly complementary to the that of financial system in its effect on the process of industrial 'catch-up.' It was utilized both as a means of promoting new industries as well as for easing the adjustment of declining sectors (cf. Ito and Kiyono).

III. *Materialization of Catch-up Deregulation of Financial System*

(1) Changes in the Pattern of Flow of Funds

Japan had accomplished a major portion of its economic 'catch-up' by early 1970s. Though Japan still remains heavily dependent on foreign technology, the trade balance in industrial technology has shifted drastically around mid-1970s (Figure 1). The phase of catch-up with borrowed technology is certainly coming to a close. Since the materialization of 'catch-up' coincided with the deterioration of economic performance of major industrial countries, there was a sharp slowdown of growth rate (Table 1), inviting significant changes in the financial structure.

FIGURE 1. RATIO OF RECEIPTS BY EXPORT TO PAYMENTS BY IMPORT OF TRADE IN INDUSTRIAL TECHNOLOGY



Source: BOJ, Keizai Tokei Nenpo (1982)

TABLE 4. SURPLUS AND DEFICIT OF FUNDS BY ECONOMIC SECTORS

(%)

Fiscal Year	Corporate Business Sector	Personal Sector	Public Sector	Foreign Sector
1959–61	−100.0	93.1	3.3	3.6
1962–64	−82.7	93.1	−17.0	6.8
1965–67	−58.3	100.0	−35.7	−6.0
1968–70	−70.4	100.0	−16.0	−13.6
1971–73	−67.2	100.0	−22.5	−10.3
1974–76	−38.3	100.0	−60.7	−0.9
1977–79	−21.4	100.0	−78.0	−6.9
1980–82	−34.4	100.0	−69.6	−0.4
1983	−34.0	100.0	−65.2	−19.5

Note: Percentage compositions to the total of surplus or deficit of four sectors.
Source: Tachi, R., p. 40 and the Flow of Funds Table of BOJ.

Let us take a look at the structure of flow of funds by sectors in Table 4. Owing to the fall in profit rate after the oil crisis, the importance of corporate sector as deficit sector has declined, and the public sector has emerged as the major deficit unit thereafter. The foreign sector has shifted from surplus to deficit after 1965, and the deficits are especially large in 1983 reflecting the massive net capital exports from Japan. It is especially important to note the high speed at which government debts have multiplied after 1974 (Table 5). The ratio of debt to GNP has risen from 7.7% during 1970–74 to 37.9% in 1981. The main reason for this rapid acumulation of government debt lies in the low tax revenue due to slow economic growth.[3]

[3] Other reasons would be (i) growth of government expenditure, especially transfer expenditure, since late 1960s and (ii) deficits owing to the unsuccessful expansionary policy after the first oil crisis.

TABLE 5. THE RATIO OF OUTSTANDING LONGTERM GOVERNMENT DEBT TO GNP

	Japan	US
1970–74 (ave.)	7.7	29.0
1975	12.6	27.1
1976	16.6	28.5
1977	21.0	29.1
1978	25.5	29.0
1979	30.9	28.0
1980	35.3	27.1
1981	37.8	26.5
1982	42.1	28.8
1983	46.4	32.3
1984	44.8	24.3

Note: End of fiscal year for Japan, and calendar year for US.
Source: BOJ, (Nihon Keizai o Chusin to suru) *Kokusai Hikaku Tokei.*

TABLE 6. LIQUIDITY OF GOVERNMENT BONDS

	1975	1979	1982
Average Maturity Period for Existing Bonds (Years)	7.7	6.8	5.6
Average Redemption Period of Newly Issued Bonds (Years)	10.0	8.8	8.3
Ratio of Volume of Transactions to Existing Bonds	0.05	1.13	1.21

Source: Zaiseiseisaku Kenkyukai *Korekara no Zaisei to Kokusai Hakko* (1984) and EPA, *Keizai Hakusho* (1984).

(2) De-regulation of Financial System

The changes in pattern of flow of funds have resulted in significant changes of financial structure in two areas.[4] Firstly, the market for government bonds saw a rapid development. As government debts continue to accumulate, the inapplicability of the earlier method of compulsory underwriting by syndicated banks has become increasingly evident, and various measures to enhance the liquidity of government bonds as well as to develop a secondary market in bonds have been undertaken. For example, a diversification in the types of bonds issued is seen: Discounted government bonds were issued after 1976, and medium-term bonds after 1978. Regulations on holdings of government bonds holding by financial institutions were also relaxed. While previously the banks were not allowed to sell government bonds on the market, unloading of bonds after one year of their issuance has been allowed since 1977, with a further shortening of this time to three months. As a result of these changes, the government bond market has been considerably liberalized. Table 6 shows a shortening of maturity periods and growing activity on the resale market.

[4] Another point that may be mentioned here is that emergence of new instruments of indirect finance related to government bonds, such as *Chukoku-Fund*, with the result of widening the menu for individual asset-holders.

Secondly, the short-term money markets have also experienced significant developments. The first impetus was provided by the rise of *Gensaki* market (bond transactions with repurchase agreement) around 1974. This occurred through spontaneous transactions among security companies saddled with still illiquid government bonds and business firms with excessive liquidity on account of slow growth and inflation. A second impetus came from the issuance of CDs by city banks after 1979. Ministry of Finance approved this system in view of the stagnation in deposits held by city banks as corporate funds shifted into *Gensaki* market.

At the end of 1973, the ratio of outstanding balance of money market instruments (call loans only at that time) to total outstanding securities and to total lendings of financial institutions was 2.8% and 1.8% respectively. Similar ratios of total money market instruments at the end of 1983 (composed not only of call loans but also CDs, *Gensaki* and bill discounting) were 7.8% and 4.7%. If we include foreign currency deposits and dollar call into market instruments, the ratios rise to 14.9% and 8.7% respectively.

(3) Internationalization of Finance

As in the case of most industrial countries of the world, the financial system in Japan has also undergone considerable internationalization. This has come about basically on account of two factors. Firstly, as the interdependence of the world economy progressed the real sector of the economy got internationalized. The ratio of exports plus imports to GNP rose from 17.7% in 1972 to 25.4% in 1982. This trend gave rise to a greater need for international asset transactions for trade financing. The second factor working in this direction was the shift to the flexible exchange rate system. In view of the volatility of exchange rate due to capital transactions, internationalization of finance was needed in order to attain the depth of foreign exchange market.

On account of these factors, international asset transactions have been liberalized considerably around 1975. Although the formal liberalization was highlighted by the enactment of the new Foreign Exchange Law in 1980, the majority view is that considerable *de facto* de-regulation had taken place even before that time and the period after 1980 has seen further de-regulation. Sinkai discusses this aspect in detail.

(4) Excess Supply of Long-term Funds

These recent changes in the pattern of flow of funds as well as in the financial system seem to have had a significant effect on the demand and supply of funds, especially of long-term funds. Our conjecture here is that the excess demand for long-term funds that existed previously has given way to excess supply in the new situation. As for the supply side, the ratio of private assets to GNP has incresed considerably (Table 3), with the possible effect of lengthening the maturity period of asset-holdings. As for the demand side, demand for investment funds by corporate sector remains at low level, and, due to the tight fiscal policy, the ratio of outstanding government debt to GNP has started showing a leveling off after 1982. The demand for long-term funds for industrial adjustment has also fallen off, and during 1977–1979 over four percent to total fiscal loans through the government finance system was found to be unutilized.

Although it is difficult to prove the existence of excess supply of long-term funds quantitatively, increased liquidity in the assets of financial institutions could be considered as

an indication in this context. As shown in Table 7, the ratio of security investments to lendings by private financial institutions increased sharply between 1975 and 1980. Since a major portion of this increment is accounted for by government bonds, the market for which has been considerable liberalization, it would be safe to infer that a significant increase in the liquidity of financial institutions has come about.

Foreign loans and investments provide a natural outlet for this excess supply of long-term funds. However, the shift to foreign assets within the portfolio of assets was not instantaneous, once for all process as could be predicted by general economic theory. This was partly because the de-regulation of international asset transactions was conducted in a stepwise manner over several years, and partly due to a fact that accumulation of human capital and expertise for international financial dealings is a gradual process especially in case of smaller financial institutions or business firms. Consequently, portfolio adjustment occurred quite slowly and at different pace depending up the type of institution. Table 8

TABLE 7. RATIO OF SECURITIES INVESTMENTS TO LENDINGS BY FINANCIAL INSTITUTIONS

	1965	1970	1975	1980	1983
City Banks	0.22	0.18	0.19	0.23	0.20
Trust Bank (Banking Account)	0.42	0.39	0.43	1.04	0.59
Trust Bank (Trust Account)	0.03	0.06	0.16	0.44	0.73
Life Insurance Companies	0.39	0.32	0.32	0.51	0.65
Long-term Credit Banks	0.13	0.15	0.21	0.31	0.31
Total Private Financial Institutions	0.22	0.19	0.22	0.34	0.36

Source: BOJ, *Keizai Tokei Nenpo* (1983) and *Flow of Funds Table.*

TABLE 8. NET FOREIGN SECURITY INVESTMENTS BY TYPE OF INVESTORS

(Unit: Hundred million dollars)

Fiscal Year	Security Companies	Insurance Companies	Trust Banks	Commercial Banks	Investment Trust	Total
1976	−0	0	0	−0	−1	1
77	1	2	2	5	0	28
78	19	5	2	16	6	74
79	17	4	2	14	2	39
1980	68	4	3	17	−6	42
81	48	10	2	12	6	79
82	26	10	5	18	−4	58
83	100	15	9	14	5	145
84	183	21	26	29	9	268

Source: MOF, *Kokusai Kinyu Kyoku Nenpo* (1985).

Note: Commercial banks are those permitted foreign exchange dealings. Total includes others. Figures for 1984 pertain to calendar year.

TABLE 9. INTERNATIONALIZATION OF BIG BUSINESS ACTIVITY

	Average for 1970–74	Average for 1975–79	Average for 1980–83	(1981)	(1982)	(1983)
Percentage Composition of the Increments in Debt and Equities						
Yen-denominated instruments	98.1	92.7	77.3	(80.9)	(75.5)	(54.7)
foreign-currency denominated instruments	1.3	7.8	22.7	(19.1)	(24.5)	(45.3)
Percentage Composition of the Increments in financial assets						
Yen-denominated instruments	2.8	2.4	29.9	(14.1)	(31.4)	(47.8)
foreign-currency denominated instruments	97.2	97.6	70.1	(85.9)	(68.6)	(52.2)

Source: BOJ, *Chosa Geppo*, Sept. 1984.
Note: Big businesses with paid-in capital over one billion Yen.

TABLE 10. OVERSEAS ACTIVITIES OF CITY BANKS AND TRUST BANKS

	City Banks				Trust Banks			
	Sept. 1981	Sept. 1982	Sept. 1983	Sept. 1984	March 1982	Sept. 1982	March 1984	Sept. 1984
(1) Percentage Composition of Overseas Branches in Lendings	15.5	17.0	15.7	16.4	6.6	7.5	7.4	8.0
(2) Percentage Composition of Overseas Branches in Security Investments	7.1	10.9	11.6	15.2	2.3	3.4	4.7	6.4
(3) Percentage Composition of Overseas Branches in Cross Return	14.5	17.6	17.9	18.9	8.9	12.3	14.8	13.4
(4) Ratio of Gross Return to Lendings and Investments (×200)								
Overseas Branches	2.31	2.51	2.77	2.31	1.91	2.39	2.31	1.81
Domestic Branches	2.23	2.24	2.24	1.93	1.07	1.09	0.90	0.92

Note: Gross return (*Eigyo Syushi* or *Keihi Sashihiki mae Rieki*) is the sum of operating profit and operating cost. Figures are calculated from the total of 13 city banks and 6 trust banks (excluding Nippon Shintaku).
Source: *Shukan Kinyu Zaisei Jijyo.*

shows that commercial banks increased their foreign security investments around 1978, while significant increases in case of trust banks or insurance companies can be seen only after 1980, and after 1983 for security companies which cater mainly to business firms. A significant increase in the international financial dealings of business firms is quite a recent

phenomenon, and Table 9 indicates a sharp rise in their foreign activities in 1983.

Another evidence on the slow portfolios adjustments is presented in Table 10 which compares the performance of foreign branches of city banks and trust banks. Although there is no quantitative regulation on international business by city banks, trust banks are still under strict regulation and control by the Ministry of Finance with respect to their foreign activities. There are ceilings on the ratio of foreign to domestic assets and, moreover, annual increase in this ratio is also regulated. As a consequence, the composition in lendings, security investments and gross return of overseas branches to the total in these banks, though rising, is still low when compared to the same in case of city banks. In the case of city banks the rate of return in domestic branches is almost same as that in overseas branches, while for trust banks domestic rate of return is only half the foreign rate. This implies that the ratio of foreign to domestic assets is still sub-optional for trust banks, and their foreign investments are increasing only gradually due to official regulations.

IV. *International Financial Intermediation and Japan as a Capital Exporter*

(1) International Financial Intermediation

The supply of long-term funds abroad calls for intermediation of export of long-term funds and import of short-term funds at international level. Needless to say, this intermediation, so far as it affects the real side of the economy, would ultimately result in a current account surplus and net capital export. This is shown in the next part of this section.

Tables 11 and 12 summarize the state of international financial intermediation. Table 11 reveals that international assets of Japanese residents increased by 75 billion dollars during 1972–78 of which $47 bn. were long-term. The international liabilities, on the other hand, rose by $53 billion of which $36 bn. were short-term. Long-term assets comprised of security investments, loans, and foreign direct investment and the like, and it is important to note here that a major part of the short-term liabilities was composed of financial account of the private sector. During 1971–78, $29 bn. out of $36 billion short-term liabilities were financial accounts, representing such activities as the intake of *Euro*-dollar loans by foreign branches of commercial banks. A similar trend is observed again in the period 1978–84.

The rows (8) and (9) of Table 12 show the time pattern of intermediation. It can be seen that the role of Japan as an international financial intermediary has increased considerably in the 1980s. During 1979–1982 period, with net asset position, given by row (7), remains more or less constant at previous levels, both the net long-term position (positive) and the net short-term position (negative) have increased drastically.

As is well known, the drastic increase in asset position after 1983—doubling from $37 bn. to $74 billion—has been the result of huge current account surplus with depreciation of yen in real terms. This suggests some sort of relationship between the increase in current account surplus and increased degree of intermediation. We will show that the latter is one of the causal factors of the former.

(2) Current Account Surplus

Let us examine the nature of the international financial intermediation in greater detail. Long-term capital exports are mainly directed towards the US and Asian LDCs; portfolio

TABLE 11. CHANGE IN ASSETS AND LIABILITIES VIS-A-VIS NON-RESIDENTS OF JAPAN

(Unit: Billion Dollars)

	1972–78	1978–84
(1) Assets	75	222
Long-term	47	116
Private Sector	35 [10]	146 [76]
Government Sector	12 [—]	20 [—]
Short-term	28	57
Private Sector	13 (12)	63 (57)
Government Sector	15 (15)	−6 (−6)
(2) Liabilities	53	184
Long-term	16	84
Private Sector	11 [11]	61 [59]
Government Sector	5 [5]	24 [24]
Short-term	36	101
Private Sector	32 (29)	98 (93)
Government Sector	4 (3)	3 (0)
(3) Total Net Assets	22	38
Long-term	31 [9]	82 [−23]
Private Sector	24 [−1]	85 [17]
Government Sector	7 [10]	−4 [−40]
Short-term	−8 (−5)	−44 (−42)
Private Sector	−19 (−17)	−35 (−36)
Government Sector	11 (12)	−9 (−6)

Source: MOF, *Kokusai Kinyu Kyoku Nenpo.*

Note: Figures in parenthesis [ ] show security investments and those in parenthesis ( ) financial accounts.

TABLE 12. LONG-TERM AND SHORT-TERM ASSETS AND LIABILITIES VIS-A-VIS NON-RESIDENTS OF JAPAN

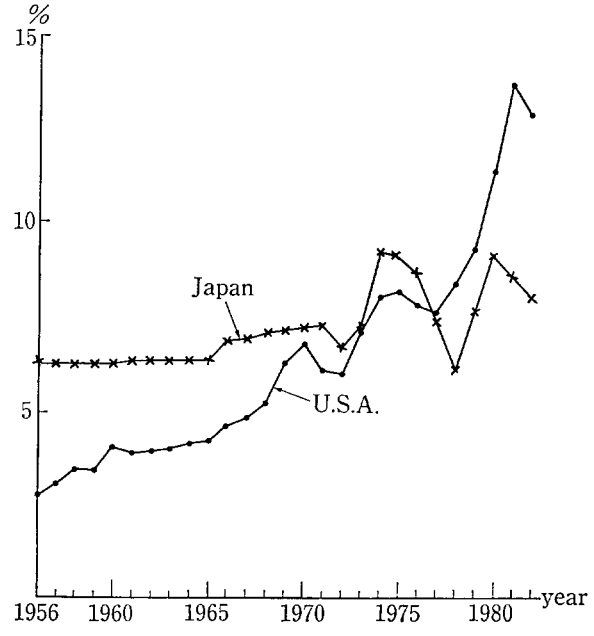
(Unit: Billion dollars)

At the End of Year	1972	'74	'75	'76	'77	'78	'79	'80	'81	'82	'83	'84
1) Assets	44	56	58	68	80	119	135	160	209	228	272	341
2) Long-term	16	29	32	37	42	63	84	88	117	139	171	229
3) Short-term	27	27	26	31	38	55	52	72	92	88	101	112
4) Liabilities	30	47	51	58	58	83	107	148	198	203	235	267
5) Long-term	13	10	14	18	20	29	36	48	74	78	103	113
6) Short-term	17	37	38	40	39	53	70	100	124	125	132	154
7) Net	14	9	7	10	22	36	29	12	11	25	37	74
8) Long-term	3	19	18	19	22	34	48	40	43	61	68	116
9) Short-term	10	−10	−12	−9	−1	2	−18	−28	−32	−37	−31	−42
10) =(1)/(7)	3.1	6.2	8.3	6.8	3.6	3.3	4.7	13.3	19.0	9.1	7.4	4.6
11) =(2)/(7)	2.1	5.2	7.3	5.8	2.6	2.3	3.7	12.3	18.0	8.1	6.4	3.6

Source: MOF, *Kokusai Kinyu Kyoku Nenpo.*

investments toward US, loans to LDCs and direct investments both to LDCs and US. The important feature of the capital exports has been that these have been carried out usually on uncovered basis. In particular, portfolio investments toward US have normally depended upon the differences in the nominal long-term interest rate between US and Japan,

FIGURE 2. RATES OF RETURN OF LONG-TERM GOVERNMENT BONDS IN US AND JAPAN



Note: BOJ, (Nihon Keizai o Chusinto suru) *Kokusai Hikaku Tokei*
Source: Rate of return for Japan during 1958–65 is subscribers, rate given in *Showa Zaiseishi* (Shusen kara Kowa made) Vol. 19, P. 390.

rising whenever the difference is as large as shown in Figure 2 for the period after 1980.

As pointed out earlier, the short-term capital import comprised, mainly, of financial accounts of foreign branches of banks. Since there are official limits on the bank's net foreign exchange position (spot and forward combined), the transactions are normally carried out on a covered basis. Moreover, with covered dealing, domestic and foreign funds are considered to be perfect substitutes for one another and banks are indifferent as to where to borrow from.[5]

The following two important consequences can be easily visualized under such circumstances. Firstly, since long-term funds flow to the US and Asian NICs, the long-term interest rates in these economies tend to fall to that extent. It can be conjectured that this inflow of long-term capital have stimulated government expenditures and private capital formation in these countries. Secondly, since long-term capital exports have been without cover and short-term borrowing with cover, there has arisen excess demand for dollars in the process of intermediation. Assuming stickiness of price levels, such an increased demand for dollars would have result in the depreciation in the real yen exchange rate.

This is nothing but the familiard overshooting phenomenon discussed in Dornbusch. It is important to note that this jump in the nominal exchange rate and the resulting real exchange rate depreciation was not a once and for all phenomenon. This is because

[5] It is well-known that the interest rate on covered foreign currency deposits is almost exactly equal to *Gensaki* rate at least after around 1980.

the export of long-term capital as a result of the portfolio adjustment by financial institutions and business firms has been a gradual and slow process due to the reasons explained in the previous section. In other words, the depreciation of real exchange rate *à la* Dornbusch should be considered to have recurred time and again since late 1970s.

Finally, with the rise in domestic absorption in the US and LDCs and the real appreciation of the dollar, it is easy to confirm that the following real phenomena ensue.[6] There will be current account surplus in Japan and deficit in the US and LDCs. The real international interest rate would rise, reducing the domestic absorption in Japan. Therefore, the international goods market attains equilibrium with higher real interest rates and appreciated real dollar rate.

Several hypothesis have been put forward to explain the recent current account surplus of Japan. Ueda emphasized the role of US government deficts, Fukao regards the recent decrease in the Japanese absorption along with the effect of the international commodity prices to be more important, and Nakatani (paper presented on this symposium) considers the international differences in the tax system responsible for the phenomenon. All these theories, more or less convincing, are concerned with the real side of the phenomenon, and stand in clear contrast to the non-academic view among the financial circles which emphasizes the importance of financial aspects of the phenomenon. Our hypothesis sketched above is an attempt to fill the gap between the two approaches.

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[6] We have made use of the neoclassical two country model developed by Ueda and Fukao.